### **AMENDMENTS TO THE CLAIMS**

### 1. (Original) A compound of formula I

$$R^4$$
 $R^5$ 
 $R^6$ 
 $R^1$ 
 $R^2$ 
 $Q$ 
 $Y^1$ 
 $Y^2$ 
 $Y^2$ 
 $Y^2$ 
 $Y^3$ 
 $Y^2$ 

wherein

 $R^1$  is selected from hydrogen,  $C_1$ - $C_4$  alkyl,  $C_3$ - $C_6$  cycloalkyl, aryl and heteroaryl, wherein the aryl or heteroaryl may be substituted by  $C_1$ - $C_4$  alkyl;

R<sup>2</sup> is selected from hydrogen and C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sup>3</sup> is selected from hydrogen, C<sub>1</sub>-C<sub>4</sub> alkyl, F, CF<sub>3</sub>, CHF<sub>2</sub> and CH<sub>2</sub>F;

R<sup>4</sup> is selected from hydrogen, F, CF<sub>3</sub>, CHF<sub>2</sub>, CH<sub>2</sub>F and CH<sub>3</sub>;

R<sup>5</sup> is selected from hydrogen and F;

R<sup>6</sup> is selected from hydrogen and F;

Q is selected from  $C_1$ - $C_4$  alkyl, optionally substituted by  $C_1$ - $C_4$  alkyl or  $C_1$ - $C_4$  alkoxy;

 $Y^{1}$  is selected from hydrogen; halogen; nitrile;  $C_{1}$ - $C_{4}$  alkoxy;  $C_{1}$ - $C_{4}$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; benzyloxy; nitro in the meta or para position; and  $C_{1}$ - $C_{4}$  alkyl ester;

 $Y^2$  is selected from hydrogen; halogen; nitrile;  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; and  $C_1$ - $C_4$  alkyl ester;

 $Y^3$  is selected from hydrogen; halogen; nitrile;  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; and  $C_1$ - $C_4$  alkyl ester; or

 $Y^1$  and  $Y^2$  may form an aromatic or non-aromatic ring, optionally substituted by halogen, nitrile,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom, benzyloxy or  $C_1$ - $C_4$  alkyl ester; as well as pharmaceutically acceptable salts, hydrates, isoforms and/or optical isomers thereof, with the exception of 4-(4-pyridin-2-yl-but-3-ynyl)-benzonitrile.

## 2. (Original) A compound of formula I

$$R^4$$
 $R^5$ 
 $R^6$ 
 $R^3$ 
 $R^2$ 
 $Q$ 
 $Y^1$ 
 $Y^2$ 
 $Y^2$ 
 $Y^3$ 
 $Y^2$ 

wherein

 $R^1$  is selected from hydrogen,  $C_1$ - $C_4$  alkyl,  $C_3$ - $C_6$  cycloalkyl, aryl and heteroaryl, wherein the aryl or heteroaryl may be substituted by  $C_1$ - $C_4$  alkyl;

R<sup>2</sup> is selected from hydrogen and C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sup>3</sup> is selected from hydrogen, C<sub>1</sub>-C<sub>4</sub> alkyl, F, CF<sub>3</sub>, CHF<sub>2</sub> and CH<sub>2</sub>F;

R<sup>4</sup> is selected from hydrogen, F, CF<sub>3</sub>, CHF<sub>2</sub>, CH<sub>2</sub>F and CH<sub>3</sub>;

R<sup>5</sup> is selected from hydrogen and F;

R<sup>6</sup> is selected from hydrogen and F;

Q is selected from  $C_1$ - $C_4$  alkyl, optionally substituted by  $C_1$ - $C_4$  alkyl or  $C_1$ - $C_4$  alkoxy;

Y<sup>1</sup> is selected from hydrogen, halogen, nitrile, C<sub>1</sub>-C<sub>4</sub> alkoxy, and C<sub>1</sub>-C<sub>4</sub> alkyl;

Y<sup>2</sup> is selected from hydrogen, halogen, nitrile, C<sub>1</sub>-C<sub>4</sub> alkoxy, and C<sub>1</sub>-C<sub>4</sub> alkyl;

 $Y^3$  is selected from hydrogen, halogen, nitrile,  $C_1$ - $C_4$  alkoxy, and  $C_1$ - $C_4$  alkyl;

as well as pharmaceutically acceptable salts, hydrates, isoforms and/or optical isomers

thereof, with the exception of 4-(4-pyridin-2-yl-but-3-ynyl)-benzonitrile.

3. (Original) A compound according to formula I of claim 1 or 2, wherein

R<sup>1</sup> is hydrogen or C<sub>1</sub>-C<sub>3</sub> alkyl;

R<sup>2</sup> is hydrogen;

R<sup>3</sup> is selected from hydrogen and methyl;

R<sup>4</sup> is hydrogen;

R<sup>5</sup> is hydrogen;

R<sup>6</sup> is hydrogen;

Q is C<sub>1</sub>-C<sub>2</sub> alkyl, optionally substituted by C<sub>1</sub>-C<sub>2</sub> alkyl;

 $Y^1$  is selected from hydrogen, chloro,  $C_1$ - $C_2$  alkoxy, and  $C_1$ - $C_2$  alkyl; and  $Y^2$  is selected from hydrogen, chloro,  $C_1$ - $C_2$  alkoxy, and  $C_1$ - $C_2$  alkyl; and  $Y^3$  is hydrogen.

- 4. (Original) A compound according to claim 1 selected from 2-[4-(3-chlorophenyl)but-1-yn-1-yl]-6-methylpyridine, 2-[4-(3-methoxyphenyl)but-1-yn-1-yl]-6-methylpyridine, 2-methyl-6-[4-(3-methylphenyl)but-1-yn-1-yl]pyridine, 2-methyl-6-(4-phenylbut-1-yn-1-yl)pyridine and 2-methyl-6-(4-phenylpent-1-yn-1-yl)pyridine.
- 5. (Currently Amended) A compound according to any one of claims 1-4 claim 1 for use in therapy.
- 6. (Original) A compound according to claim 5, wherein the therapy is treatment or prevention of gastroesophageal reflux disease.
- 7. (Original) Use of a compound according to formula I of claim 1 or 2, or a pharmaceutically acceptable salt or an optical isomer thereof, for the manufacture of a medicament for the inhibition of transient lower esophageal sphincter relaxations.
- 8. (Original) Use of a compound according to formula I of claim 1 or 2, or a pharmaceutically acceptable salt or an optical isomer thereof, for the manufacture of a medicament for treatment or prevention of gastroesophageal reflux disease.

# CLAIMS 9-10 (CANCELED)

11. (Original) A pharmaceutical composition comprising a compound of formula I of claim 1 or 2 as an active ingredient, together with a pharmacologically and pharmaceutically acceptable carrier.

12. (Original) A process for the preparation of a compound of formula I, whereby a coupling reaction of an aryl bromide A

$$R^4$$
 $R^5$ 
 $R^6$ 
 $R^3$ 
 $R^6$ 
 $R^6$ 

and an alkyne B

$$= R^{1} \qquad Y^{1} \qquad Y^{2}$$

$$= R^{2} \qquad Q \qquad Y^{3}$$

$$= R^{2} \qquad Q \qquad Y^{3}$$

is performed in the presence of a base such as triethyl amine at room temperature to 60 °C, and wherein

 $R^1$  is selected from hydrogen,  $C_1$ - $C_4$  alkyl,  $C_3$ - $C_6$  cycloalkyl, aryl and heteroaryl, wherein the aryl or heteroaryl may be substituted by  $C_1$ - $C_4$  alkyl;

R<sup>2</sup> is selected from hydrogen and C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sup>3</sup> is selected from hydrogen, C<sub>1</sub>-C<sub>4</sub> alkyl, F, CF<sub>3</sub>, CHF<sub>2</sub> and CH<sub>2</sub>F;

R<sup>4</sup> is selected from hydrogen, F, CF<sub>3</sub>, CHF<sub>2</sub>, CH<sub>2</sub>F and CH<sub>3</sub>;

R<sup>5</sup> is selected from hydrogen and F;

R<sup>6</sup> is selected from hydrogen and F;

Q is selected from  $C_1$ - $C_4$  alkyl, optionally substituted by  $C_1$ - $C_4$  alkyl or  $C_1$ - $C_4$  alkoxy;

 $Y^1$  is selected from hydrogen; halogen; nitrile;  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; benzyloxy; nitro in the meta or para position; and  $C_1$ - $C_4$  alkyl ester;

 $Y^2$  is selected from hydrogen; halogen; nitrile;  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; and  $C_1$ - $C_4$  alkyl ester;

 $Y^3$  is selected from hydrogen; halogen; nitrile;  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; and  $C_1$ - $C_4$  alkyl ester; or

 $Y^1$  and  $Y^2$  may form an aromatic or non-aromatic ring, optionally substituted by halogen, nitrile,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom, benzyloxy or  $C_1$ - $C_4$  alkyl ester.

## 13. (Original) A compound of formula B

wherein

 $R^1$  is selected from hydrogen,  $C_1$ - $C_4$  alkyl,  $C_3$ - $C_6$  cycloalkyl, aryl and heteroaryl, wherein the aryl or heteroaryl may be substituted by  $C_1$ - $C_4$  alkyl;

 $R^2$  is selected from hydrogen and  $C_1$ - $C_4$  alkyl;

R<sup>3</sup> is selected from hydrogen, C<sub>1</sub>-C<sub>4</sub> alkyl, F, CF<sub>3</sub>, CHF<sub>2</sub> and CH<sub>2</sub>F;

R<sup>4</sup> is selected from hydrogen, F, CF<sub>3</sub>, CHF<sub>2</sub>, CH<sub>2</sub>F and CH<sub>3</sub>;

Q is selected from  $C_1$ - $C_4$  alkyl, optionally substituted by  $C_1$ - $C_4$  alkyl or  $C_1$ - $C_4$  alkoxy;

 $Y^1$  is selected from hydrogen; halogen; nitrile;  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; benzyloxy; nitro in the meta or para position; and  $C_1$ - $C_4$  alkyl ester;

 $Y^2$  is selected from hydrogen; halogen; nitrile;  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; and  $C_1$ - $C_4$  alkyl ester;

 $Y^3$  is selected from hydrogen; halogen; nitrile;  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; and  $C_1$ - $C_4$  alkyl ester; or

 $Y^1$  and  $Y^2$  may form an aromatic or non-aromatic ring, optionally substituted by halogen, nitrile,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom, benzyloxy or  $C_1$ - $C_4$  alkyl ester.

- 14. (Original) A compound selected from 1-chloro-3-(4,4-dibromobut-3-en-1-yl)benzene; 1-methoxy-3-(4,4-dibromobut-3-en-1-yl)benzene; 1-methyl-3-(4,4-dibromobut-3-en-1-yl)benzene; 1-but-3-yn-1-yl-3-chlorobenzene; and (4,4-Dibromo-1-methyl-but-3-enyl)-benzene.
- 15. (Original) A method for the inhibition of transient lower esophageal sphincter relaxations whereby an effective amount of a compound of formula I of claim 1 or 2 is administered to a subject in need of such inhibition.
- 16. (Original) A method for the treatment or prevention of gastroesophageal reflux disease, whereby an effective amount of a compound of formula I or claim 1 or 2 is administered to a subject in need of such treatment or prevention.